

- (1) No new matter has been added to the application by the Amendment.
- (2) The Amendment resolves all issues raised by the Examiner in the pending Office Action.
- (3) The subject matter of the Amendment already has been included in the Examiner's search and, therefore, does not require the Examiner to perform further searching. More specifically, prior to the present amendment, claim 1 recited as a limitation the recognition of boundary marks by a microprocessor and further recited as part of the wherein clause the storage in a microprocessor of a preset sequence corresponding to the boundary marks.
- (4) The Amendment places the application in condition for allowance or in better condition for appeal.
- (5) The Amendment does not result in a net addition of claims to the application.

Consequently, Applicant respectfully requests that the Amendment After Final Rejection be entered in accordance with 37 C.F.R. §116 and MPEP 714.13.

INTERVIEW

The undersigned would like to thank the Examiner for the courtesies extended during the telephonic interview held on August 9, 2001. During the interview, the definition of the word "recognize" was discussed. The Examiner advised that in detecting the boundary of a workpiece, the device of Roy *et al.* "recognizes" the presence of the workpiece boundary. Amending claim 1 to recite as a limitation the recognition of a feature of a boundary mark corresponding to a preset sequence of marks stored in the microprocessor of the claimed trimming and cutting device also was discussed. Although no agreement was reached regarding the patentability of claim 1 so amended, the foregoing amendment to claim 1 is consistent with the discussion held at the interview.

Claim Rejections – 35 U.S.C. §102/103

The Examiner has rejected claims 1 and 2 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No.

5,586,479 (Roy *et al.*). The Examiner contends that Roy *et al.* discloses a cutting device with every structural limitation of the claimed invention including a first pair of rollers (e.g., 56, 62) which are coupled and thus driven together by a first motor; a cutting assembly (e.g., 60) which is driven by a second motor; a third motor (e.g., 84) pivoting one of the cutting assembly and the pair of rollers; a reading system having first (e.g., 58A) and second (e.g., 58B) spaced apart optical sensors; and a micro-processor (e.g., 30) which recognizes marks on the workpiece. The Examiner also contends, in the alternative, if it is argued that Roy *et al.* does not explicitly disclose a first motor and a second motor, the Examiner takes official notice that such a configuration is old and well known in the art and therefore would have been obvious to one having ordinary skill in the art to provide a first and second motor of the present invention. Applicant respectfully traverses this rejection.

Claim 1 as amended recites, *inter alia*,

a microprocessor (12) in communication with said reading system and the second motor (9) and the third motor (5), the microprocessor having stored therein a preset sequence of marks corresponding to the feature of the boundary marks (M), the microprocessor (12) processing a signal from the reading system, recognizing the feature of the boundary marks (M) and controlling the second and third motors (9, 5).

Applicant has amended claim 1 to more particularly point out and claim that the processing of the signal from the reading system includes not only recognizing a boundary mark but also storing a preset sequence of marks corresponding to a feature of the boundary mark (M) and recognizing the feature of the boundary mark. As disclosed in the specification, see page 5, lines 11-13, recognition of the boundary mark is linked to the following:

the cutting mark consists of a precise black/white sequence stored in the microprocessor, which can recognize through scanning any type of mark with set features without any limit in size.

Roy *et al.* discloses a cutting apparatus 26 that determines the amount of skew of images on an edge registered receiving sheet by detecting with a sensor device the lead edge of the images. The disclosed sensor device indicates to a logic/control 30 that the leading edge of the image has been detected when a pair of photodiodes senses a discontinuity in the reflectance of the receiving sheet. The change in reflectance arises from the presence of pigmented toner at the lead edge of the image.

Roy *et al.* does not disclose each and every element of the present invention and is an entirely different device from the present invention.

Roy *et al.* does not disclose storing a preset sequence of marks corresponding to a feature of the boundary mark (M) and recognizing the feature of the boundary mark. Instead, Roy *et al.* discloses a device that detects the lead edge of an image based solely on the sensing of a discontinuity in the reflectance of the receiving sheet. Consequently, Roy *et al.* does not teach a trimming and cutting device having a microprocessor that stores a preset sequence of marks corresponding to a feature of the boundary mark (M) and recognizes the feature of the boundary mark. Furthermore, there is no objective teaching in Roy *et al.* that would enable one of ordinary skill in the art to modify the Roy *et al.* device in a manner that would render the present invention obvious under 35 U.S.C. § 103(a).

Accordingly, Applicant respectfully submits that Roy *et al.* does not disclose each and every element of the present invention and does not provide an objective teaching that would render the present invention obvious. Therefore, Applicant respectfully requests that the rejection of claims 1 and 2 be withdrawn.

Claim Rejections – 35 U.S.C. §103

The Examiner has rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Roy *et al.* The Examiner admits that Roy *et al.* lacks the cutting assembly having first and second parallel spaced apart blades. The Examiner takes official notice that such a cutter configuration is old and well known in the art and that it would have been obvious to one of ordinary skill in the art to provide to provide first and second parallel spaced apart blades in the present invention. Applicant respectfully traverses this rejection.

In view of the above discussion regarding amended claim 1, even if the Roy *et al.* cutting apparatus were modified to include first and second parallel spaced apart blades, claim 8, depending from claim 1 is patentably distinguishable over the combination. Accordingly, Applicant respectfully requests that the rejection of claim 8 be withdrawn.

CONCLUSION

In view of the foregoing amendment and remarks, Applicant respectfully submits that the present application, including claims 1, 2 and 8, is in condition for allowance, and such action is respectfully requested. Entry of the Amendment, withdrawal of the Final Rejection and Notice of Allowability of claims 1, 2 and 8 is respectfully requested. Should the Examiner choose to issue an Advisory Action, Applicant respectfully requests that prior thereto, the Examiner telephone the undersigned at the telephone number indicated to discuss the application.

Respectfully submitted,

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(Date)

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MARKED-UP VERSION OF AMENDED CLAIM

1. (Three Times Amended) An automatic device for trimming and cutting at right angles paper and other graphic and photographic substrates (1) with a series of images (10) printed thereon and marked by boundary marks (M) having a feature comprising a preset sequence of white and black lines extending at least along a whole edge of each of said images (10) oriented at right angles to a feed direction of the substrate, the automatic device comprising:

at least a pair of rollers (2) for feeding the substrate,
a first motor (3) driving the pair of rollers,
a cutting assembly (7) spaced apart from the pair of rollers,
a second motor (9) driving the cutting assembly to cut,
a third motor (5) pivoting one of the cutting assembly and the pair of rollers from time to time to align said cutting assembly (7) and one of said boundary marks (M),
a reading system having first and second spaced apart optical sensors (4, 4') that detect one of the boundary marks (M) between the images, and
a microprocessor (12) in communication with said reading system and the second motor (9) and the third motor (5), the microprocessor having stored therein a preset sequence of marks corresponding to the feature of the boundary marks (M), the microprocessor (12) processing a signal from the reading system, recognizing the feature of the boundary marks (M) and controlling the second and third motors (9, 5)[,
wherein each of the boundary marks (M) is a preset sequence, stored in said microprocessor (12), of white and black lines extending at least along a whole edge of each of said images (10) oriented at right angles to a feed direction of the substrate].